## RULES

FOR

### REGULATING NOMENCLATURE

WITH A VIEW TO SECURE A STRICT APPLICATION
OF THE

LAW OF PRIORITY

IN

ENTOMOLOGICAL WORK

COMPILED BY

LORD WALSINGHAM

AND

JOHN HARTLEY DURRANT

LONGMANS, GREEN, AND CO.

LONDON, NEW YORK, AND BOMBAY

2 Nov. 1896

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### INTRODUCTION.

THE following Rules are at present in force for regulating all work done in the study of microlepidoptera at Merton. They may be called the "Merton Rules" for convenience of reference. The object in these rules is to ensure absolute obedience to the Law of Priority. This law embodies the moral obligation which rests with every one who has to deal with questions involving the study of work done by those who have preceded him, that he should respect such of their conclusions as are found to be correct, and can claim no right to demolish those which cannot be proved to be Objection has often been raised to the idea erroneous. that a man of science obtains any vested right or title to the form in which he registers the conceptions he conveys to the public mind. Yet, if we do not acknowledge such a right, we offend against the moral law which applies equally to zoological and social questions. This, however, is not the only point involved; there is the equally important point of ultimate convenience in securing finality of nomenclature, which can be done only by precise methods. We claim that the moral law is the strongest foundation on which such precise methods can be based. Those who might perhaps be scarcely disposed to recognise a moral law as thus applied will at least recognise the desirability of such results as must proceed from its application, and will, perhaps, welcome any honest effort to attain such results. Many codes of rules for zoological nomenclature have been drawn up at different times, and under various circumstances; in all of these the Law of Priority, so far as applied to names, has been an important factor, but we are not aware that in any of these rules the actual work and intention of an author has been guarded to the same extent as the names which he has given to his conceptions.

It has been one of our objects to define a method by which the recognition of antecedent work can be consistently secured, regarding this also as no less a moral obligation capable of being met by the same rules which apply to mere names.

Existing codes have been for the most part drawn up in different countries and for different sets of workers, and it has been found impossible to secure uniform methods in all countries or in all branches of zoology, however much this may have been the hope and intention of their All branches of zoological study should unauthors. doubtedly be represented on any committee entrusted with the task of drawing up rules for general guidance. The difficulties experienced by an ornithologist may have been amply provided for, whereas such a worker may be completely ignorant of those which an entomologist will encounter in studying any branch of his larger and wider subject. The unconsumed smoke which hangs around botanical nomenclature seems at present to preclude the possibility of obtaining much assistance in that quarter towards the object in view. A persistent disregard of Rule 18 has encumbered the study of botany with innumerable tautonyms in which the Law of Priority has been utterly ignored. We are quite aware that we possess no authority whatever to regulate the proceedings of our fellow-workers, nor is the publication of these rules an

attempt to do so, except in so far as it may induce them to study the subject from the point of view put forward, and by calling their attention to cases hitherto unprovided for may perhaps conduce to some satisfactory settlement being ultimately arrived at. Such settlement, if it be ever reached, must of course be based upon a consensus of opinion among those who are widely authorised or pre-eminently entitled not only to give expression to their own views, but to claim the adhesion of others less competent or less instructed than themselves. The object of all rules should surely be to secure precision, uniformity, and finality: any sacrifice of these objects to considerations of mere convenience can only result in the creation of greater inconvenience at some future date. The inconveniences from which workers in entomology now suffer would have been entirely avoided had the earlier authors studied and recognised the work of their predecessors, or adopted some such rules as are here set forth, beginning from the time The earliest sinner in this respect was of Linnæus. Fabricius, but Stephens in creating the necessity for Rule 48 has exhibited even greater ingenuity in his aberrations. We think the following code, mainly founded on existing codes and in some cases literally copied from them, will be absolutely sufficient to enable priority to be rightly determined where doubt or difficulty exists; but we should be glad to hear of any case for which they do not appear to provide, merely stipulating that we cannot undertake to solve conundrums, unless accompanied by such references and data as will enable these rules to be applied to them, so far as they go, without original research.

WALSINGHAM.

JNO. HARTLEY DURRANT.

Merton Hall, Thetford, October 15, 1896.

# PREMISS.

Zoology became a science only when it recognised two grades in the animal kingdom, the species and the genus. These two conceptions are hypothetically considered as absolutely immutable. A species is not a valid species unless it can be separated specially from every other species, and a genus is not a valid genus unless it can be separated generically from every other genus.

Zoology became an intelligible science when it was recognised that every species should possess a special name and every genus a generic name. This system of nomenclature was first enunciated by Linnæus in the "Systema Naturæ" (edition X.), 1758; and as we owe the conception of the special and generic name to Linnæus, we are bound to commence our nomenclature from the year 1758, when he published his epoch-marking work.

# RULES.

- 1. Zoological nomenclature includes extinct as well as recent forms, but excludes botanical names.
- 2. Zoological nomenclature is founded on the recognition of two grades in the animal kingdom—the species and the genus.

- 3. Every species to be designated by a special name, and every genus by a generic name.
- 4. Names may be applied to every grade used in classification, whether of higher or lower position than that of the species.
- 5. The same name may be used once only in the same grade, with the exception of special names, so long as they occur in different genera, and of subspecial names so long as they are subservient to different species.
- 6. Names applied to grades higher than a genus should have distinctive terminations, plural in form, and uniform in each grade. (This rule has already been adopted in the case of families and sub-families.)
- 7. Zoological names must be Latin, or, if adopted from other languages, must be formed in accordance with the rules of Latin orthography.
- 8. Names resolve themselves into two classes—valid names and invalid names.
- 9. The system of giving a special and a generic name to a species having originated with Linnaus in the TENTH edition of the "Systema Natura," 1758, this work and date must be accepted as the starting-point of zoological nomenclature.
- 10. A name published before 1758 cannot be accepted as valid, and may be used in another sense by a subsequent author.

- 11. A name cannot be accepted as valid unless (1) it has been published, and (2) defined.
- 12. Publication must be taken to mean that the public can have access by purchase to the matter in a form other than MSS.

[The usual method of publication is by typography, but any other form of manifold printing (e.g. lithography) which would be required to constitute publication (as applied to books) in the legal sense must be accepted as fulfilling the requirements of publication in the zoological sense. The increasing variety of modern processes renders the British Association rule requiring typography obsolete.]

13. The author of a name is he who first fulfils the requirements of No. 12.

[If his work be anonymous and his name unknown, the title of the publication should be personified, but if his name can be ascertained it should be employed in brackets.]

- 14. The date of publication is the earliest day on which the requirements of No. 12 are fulfilled.
- 15. By publication a named conception becomes established, and the name, if valid, cannot be suppressed even by its author.
- 16. Definition must convey, either by description or by illustration, information that may enable the author's conception to be recognised.
- 17. Of permissible names for the same conception only the one first published is valid, provided that in its appli-

cation its author has conformed to the requirements of publication and definition.

18. If it be held that the generic and special names may not be tautonymic, the Law of Priority will determine whether the special or the generic name should be changed, e.g. Cossus cossus, L.

[The date of publication of the special name cossus by Linnæus antedates by many years its employment in the generic sense by Fabricius; wherefore, if tautonymy is not permissible, it is the special name which must be regarded as valid, and the generic name which must be changed.]

- 19. Invalid names considered merely as words are of three classes:—
  - (1) Homonymous (i.e. the same name applied to different conceptions).
  - (2) Homophonous (i.e. words differently written, but indistinguishable in sound, applied to different conceptions).
  - (3) Synonymous (i.e. words of different derivation applied to the same conception).
- 20. A name homophonous with a valid name is invalid in accordance with the rule governing homonymy (Rule 5).
  - e.g.: Ucetia, Wkr. would invalidate Eusesia.

    Telea, Hb. invalidates Teleia, Hb.
- 21. A name so similar to a valid one as to be almost homophonous or almost homonymous is invalid in accordance with the rule governing homonymy (Rule 5).
  - e.g.: Pandemos, Hb. invalidates Pandemis, Hb. Eupsilia, Hb. invalidates Eupselia, Meyr. Peronæa, Poli invalidates Peronea, Crt.

- 22. A name wrongly written is invalid if, on legitimate correction, it becomes homonymous or homophonous with a valid name.
  - e.g.: Grapholitha, Hb. invalidates Grapholita, Tr.
- 23. It is advisable that names homonymous in derivation should not be rendered different in form by employing a different sexual suffix, but as they create no confusion of idea in the case of persons (e.g. Victor and Victoria; duke and duchess), or of animals (e.g. fox and vixen, lion and lioness), it is not apparent that in the case of genera such words (e.g. Sciaphilus, Col. Sciaphila, Lep.) can cause any confusion; nevertheless, in the future such double emploi should be avoided. In the case of species, words identical in meaning but differing slightly in form should be avoided: e.g. fluviatilis, fluvialis, fluviorum, fluviaticus, &c.
- 24. A name which involves a false proposition is invalid, and may be changed.
- 25. A name which is offensive (whether politically, morally, or by its irreverence) is invalid, and should be expunged from zoological nomenclature.
- 26. A name in any grade can only be properly conserved by retaining as its exponent some one of its original types which has never been legitimately rejected from that section by any previous author.
- 27. The right of an author to correct antecedent work is undoubted, provided always that in making such corrections the intentions of his predecessors be respected, unless proved to be erroneous.

- 28. In all cases of uncertainty, whether of identification or of validity, the decision of the author first dealing with the question shall be accepted as final, unless his conclusions can be proved erroneous.
- 29. Correction may be made either orthographically or zoologically.
- 30. An orthographical correction may be made by emending a name wrongly formed, or by changing the termination of a species if it do not agree in gender with the generic name.
- 31. A zoological correction may be made by restriction or by extension of a systematic conception, but in either case the original name must be retained if valid.
- 32. A zoological correction may be made by change of termination in emending the position of a name in a grade higher than a genus.
- 33. Zoological or orthographical corrections do not affect the original authorship of the name.
- e.g. (1) Tinea is still to be attributed to Linnaus, although it is now restricted and bears a very different signification from that which Linnaus assigned to the name.
- e.g. (2) "cretidactylus," Fitch (a solecism) was very properly corrected to gypsodactylus by Zeller, and should be known as gypsodactylus, Fitch (Z. emend.).
- 34. Valid names must be founded on types, with the exception that a new name may be substituted for one invalid as being homonymous either in its inception or in its adoption, and this may be done upon the evidence of

published information or illustration without the type having necessarily been seen by the author of the correction, but the type shall be the type to which the new name applies.

- e.g. Pyralis griseana, F. In 1839 Zeller described specimens of what he considered to be this species as Stenoma griseanum, F. (Z. No. 1). In 1854 he regarded this identification as incorrect, and redescribed the same specimens as Antæotricha walchiana, Cram. In 1877 he described another species as Antæotricha griseana, F. (Z. No. 2). We are certain that griseana, Z. No. 1 is not walchiana, Cram., and we can adduce strong evidence to prove that griseana, Z. No. 1 should be known as griseana, F. On the other hand, we are convinced that griseana, Z. (No. 2) is a good species, and as a species it has been sufficiently characterised by Zeller, but its name is invalid as being a homonym. Although we have not seen the species, we give it the name "zelleri," n.n., the type of which name (not species) is Zeller's type of Antæotricha griseana No. 2 in Mus. Stgr. Had we specimens of the species we should be at liberty to constitute them the type of zelleri, sp.n. [Should any subsequent author find an error in this series of identifications, other rules amply provide for its correction.]
- 35. The type of a conception is to be found in the grade below it.
- 36. A special type must be a zoological entity in its imaginal form, with the exception that in geology the indications of a type may be accepted in lieu of the type itself.
- e.g. (1) In geology a natural cast (not an artificial one) may be the type of a valid name.

- e.g. (2) In geology the recognisable work of a zoological entity may be the type of a valid name (as in the case of Nepticula fossilis, described from a mine in a fossil leaf).
- 37. A special name which in its inception or adoption was homonymous with a valid name cannot be maintained even if subsequently found to be generically heterotypical.
- e.g. (1) Tortrix pygmæana, Hw. was in its inception homonymous with Tortrix pygmæana, Hb., and is invalid although generically heterotypical.
- e.g. (2) Tortrix fuligana, (Hb.) Hw. was in its adoption homonymous with Tortrix fuligana, Hb., and is invalid, although generically heterotypical.
- 38. The type of a species belongs to one of the following categories:—
  - (1) Type (described from a unique specimen or from a single specimen selected from a series).
  - (2) Type (= Type 3 + Type 2 described from a single specimen of each sex).
  - (3) Co-Types (described from more than one specimen, no single one being selected as the type. The type=the sum of the co-types).
- 39. Each of the remaining specimens of a series from which the type was selected is called a Paratype.

A specimen subsequently named by the author after comparison with the type is called a Metatype.

A specimen named by another than the author, after comparison with the type, is called a Homotype.

A specimen collected in the exact locality whence the type was obtained is called a Topotype.

[We have added the term Homotype to those proposed

by Mr. Oldfield Thomas (Pr. Z.Soc.Lond. 1893, 241-2), and have slightly restricted the original definition of *Metatype* to the exclusion of its necessarily being topotypical.]

- 40. The type of a genus must be one of the species originally placed in the genus by its founder, but no species can be regarded as a possible type if it can be shown that the founder of the genus had not seen it.
- [N.B.—This and the following rules (40-47) apply with equal force to the sections of any grade.]
- 41. A genus from its foundation belongs to one of three classes:—
  - (1) Monotypical (i.e. described from a single species, no other being known; or described from a single specified species with which are associated other species considered to be identical in structure).
  - (2) Isotypical (i.e. described from more than one species, all of which are congeneric).
  - (3) Heterotypical (i.e. described from more than one species, these differing in structure).

[In class one, the single species described, or the single species cited, is the type.

In classes two and three, the sum of the species therein contained constitutes the "type" of the original author, unless it was indicated that one or more of these species were not considered to be typical.]

42. If the author of an isotypical or heterotypical genus subsequently removes one of his original types to another genus, this species ceases to be a possible type for the genus in which it was first placed.

- 43. In ascertaining the type of a genus not monotypical, absolute adherence must be given to the Law of Priority.
- 44. He who first restricts a genus under its own name limits the possible type to one of the species included in his restriction: but, if possibly avoidable, a heterotypical genus must not be restricted to the detriment of an existing monotypical or isotypical genus.
- 45. When a heterotypical genus by restriction or specification of type becomes monotypical, the single species to which it is limited must thenceforth be accepted as the type of the genus, provided that this species had not previously been constituted the type of another genus.
- 46. Restriction is effected by omission, by elimination, or by specification.
- 47. The name of a heterotypical genus dates from its publication, but it dates as a genus from the time that it became isotypical or monotypical.
  - e.g. Tortrix, Jones 1850 (heterotypical for)
    - (1) viridana, Jones.
    - (2) atrana, Jones.

Heterognomon, Smith 1855 (type) viridana, Jones.

Pandemis, Smith 1855 (type) atrana, Jones.

[Jones first published a generic name for which viridana was a possible type, but Smith first established Heterognomon as a genus based on the type viridana. The Law of Priority forbids the subsequent restriction of Tortrix to the detriment of Heterognomon, and therefore by elimination atrana was constituted the type of Tortrix, Jones, with which Pandemis, Smith is synonymous.

[N.B. For brevity of illustration a fictitious example has been employed.]

- 48. If a subsequent author subdivide a heterotypical genus, distributing its types among differently named genera but retaining the original name as a subgeneric heading in more than one genus to which he refers a type, the Law of Priority shall be rigidly enforced, and his first limitation shall be taken as restricting the type; BUT should he in addition make use of the heterotypical generic name in a generic sense, it shall be held that it was his intention to limit the type to the species referred to in this sense, and his previous subgeneric limitation shall be ignored.
- e.g. (1) Hübner published the heterotypical genus Eudemis, Verz. bek. Schm. 382 (1826). Stephens adopted this name in a subgeneric sense for the four genera Ditula, Stph., Pseudotomia, Stph., Cnephasia, Crt., and Sericoris, Tr. He constituted profundana, F. (=porphyrana, Hb., Stph.) the type of the first subgenus so named under Ditula. The Law of Priority should prevent any other species from becoming the type of Eudemis, Hb.
- e.g. (2) Hübner published the heterotypical genus Notocelia, Verz. bek. Schm. 379–80 (1826). Stephens' first use of this name is as a subgenus of Spilonota, Stph., in which sense ocellana, F. became the type of Notocelia, Hb.

But a few pages later he employed *Notocelia* in a generic sense with the type *uddmanniana*, L., describing the genus and remarking on its synonymy. It is, therefore, obvious that it was his intention to retain the full generic value of the name, and his second limitation should be adopted in preference to his first.

- 49. In exact citations:—
- (1) Hybrids should be designated by the employment of the names of both parents, with the sex of

each, if known, united within brackets by a horizontal cross, and followed without the brackets by the sex of the progeny.

e.g.: Smerinthus (ocellatus, L.  $\mathcal{E} \times populi$ , L.  $\mathcal{E}$ )  $\mathcal{E}$ .

[i.e. a ? hybrid was the offspring of a union between a S. occilatus, L. and a ? S. populi, L.]

(2) The names of subspecies, varieties, &c., should be united by a perpendicular cross.

e.g. Tortrix viburniana, F. + viburniana, F. Tortrix viburniana, F. + galiana, Crt.

[In writing of the species as a species, without reference to any particular form, *Tortrix viburniana*, F. would suffice, but if the variety *viburniana*, F. of the species *Tortrix viburniana*, F. is intended, then it should be cited as *Tortrix viburniana*, F. + *viburniana*, F.]

(3) The names of seasonal forms (or broods) should be distinguished by the addition of the brood name to the special name, preceded by the ordinal number of the brood within brackets.

e.g. Vanessa levana, L. (I. levana, L.) Vanessa levana, L. (II. prorsa, L.)

50. The following signs may with advantage be employed in citation:—

 $\theta = \text{egg}$  (Kirby & Spence).

 $\oplus$ =larva (Kirby & Spence).

D = pupa (Kirby & Spence).

⊙=imago (Kirby & Spence).

♂ = male (Kirby & Spence).

♀ = female (Kirby & Spence).

9 = neuter (Kirby & Spence).

 $\parallel$  = a synonym.

 $\S = a \text{ homonym}.$ 

\* = invalid as not containing the type of the conception.

 $\dagger$  = wrongly written either in inception or in adoption.

‡ signifies the correction of a name hitherto wrongly written.

In neuration:

7 and 8 stalked may be written: 7 and 8 🖂

7 and 8 connate may be written: 7 and 8 <

7 and 8 anastomosed may be written: 7 and 8 ×

7 and 8 coincident may be written: 7 and 8 -

7 and 8 separate may be written: 7 and 8

This, of course, applies to any pair of veins.

51. In cataloguing, the employment of a small serial number after each reference, to be repeated in connection with the citation of the information therein given, will save an unnecessary amount of research when it becomes necessary to ascertain the authority for any item.

e.g. Episimus argutanus, Clem.

 $= allutana, Z^{(3)}.$ 

Bactra? argutana, Clem. Pr. Ac. Nat. Sc. Phil. XII. 358 (1860)<sup>(1)</sup>; Grapholitha (Hedya) allutana, Z. Ver. Z.B. Ges. Wien. XXV. 295-6. Pl. IX. 27 (1875)<sup>(2)</sup>; Semasia argutana, Fern. Tr. Am. Ent. Soc. X. 45, No. 319 (1882)<sup>(3)</sup>. Hab. United States<sup>(1-3)</sup>  $\odot$  VII.<sup>(2)</sup>.

⊕ Hamamelis virginica (1,3).

It will be seen at once by these numbers who is responsible for the identification argutana, Clem. = allutana, Z.; who said that the imago flies in July, and who recorded the locality and food plant.

Spottiswoode & Co. Printers, New-street Square, London.







